



Environmental and Planning Consultants

440 Park Avenue South
New York, NY 10016
tel: 212 696-0670
fax: 212 213-3191
www.akrf.com

April 26, 2011

Sally Dewes
NYSDEC – Remedial Bureau C
625 Broadway
Albany, New York 12233-7016

Re: Soil Vapor Investigation Report
Magna Metals Site
NYSDEC Site No. 360003
Cortlandt, New York

Dear Ms. Dewes:

On behalf of ISC Properties, enclosed are a hard copy and a CD containing one electronic copy of the Soil Vapor Investigation Report for the Magna Metals site. If you have any question or require additional information, please contact me at 914-922-9356.

Sincerely,

AKRF, Inc.

A handwritten signature in black ink, appearing to be 'MG' or similar, written over a horizontal line.

Marc S. Godick, LEP
Senior Vice President

cc: N. Ward-Willis – Keane & Beane
R. Chozick - TetraTech
D. Duthaler – Baker Properties
B. Zieroff – AKRF

Magna Metals Site
NYSDEC Site No. 360003
CORTLANDT, NEW YORK

Soil Vapor Investigation Report

AKRF Project Number: 40256

Prepared by:



AKRF, Inc.
34 South Broadway, Suite 314
White Plains, NY 10601

APRIL 2011

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1.0 INTRODUCTION

Investigation at the Magna Metals Site, located in Cortlandt, New York, has been conducted to comply with a New York State Department of Environmental Conservation's (NYSDEC) Consent Order (Site No. 360003). In November 2006, the NYSDEC issued correspondence requesting sampling of the office/warehouse building located east of the former Magna Metals building to confirm that soil vapor intrusion is not occurring. In June 2007, AKRF, Inc. (AKRF) submitted a Soil Vapor Investigation Report to the NYSDEC that summarized the results of sub-slab soil vapor samples and air sampling completed to satisfy the NYSDEC requirements. In September 2007, the NYSDEC issued correspondence requesting that additional work be performed. In May 2008, AKRF submitted a Soil Vapor Investigation Report to the NYSDEC that summarized the results of sub-slab soil vapor samples and air sampling completed to satisfy the NYSDEC requirements. In February 2009, the NYSDEC issued correspondence requesting a third sampling event be performed in accordance with the December 2007 Soil Vapor Investigation Work Plan. In June 2009, AKRF submitted a Soil Vapor Investigation Report to the NYSDEC that summarized the results of sub-slab soil vapor samples and air sampling completed in March 2009 to satisfy the NYSDEC requirements. On July 3, 2009, the NYSDEC issued correspondence requesting that a Soil Vapor Monitoring Work Plan for the Polymedco office facility be submitted to the NYSDEC and the New York Department of Health (NYSDOH) for review and approval. In August 2009, the NYSDEC approved the Work Plan prepared by AKRF to complete soil vapor monitoring for the Polymedco office facility and required annual sampling to take place prior to January 31 of each heating season until the completion of vapor mitigation. In March 2010, AKRF submitted a Soil Vapor Investigation Report to the NYSDEC that summarized the results of sub-slab soil vapor samples and air sampling completed in January 2010 to satisfy the NYSDEC requirements. This report documents the collection and analysis of sub-slab soil vapor and ambient air samples collected during the January 2011 to satisfy the NYSDEC requirements.

2.0 SITE DESCRIPTION

2.1 Site Location

The Magna Metals site is located in the Town of Cortlandt, Westchester County, New York, near the intersection of Furnace Dock Road and Maple Avenue. A site location map is included in Figure 1. Nearby towns include Peekskill and Croton-on-Hudson, and the Hudson River is located 3 miles west of the site.

2.2 Site and Vicinity Characteristics

Locally, the site is part of a larger commercial property owned by Baker Properties, having several operating businesses which currently include Polymedco, Inc., Motion Labs, Inc., and International Purchasing Systems. The office/warehouse building was reported by the owner to include some manufacturing activities. Baker Properties acquired the property from ISC Properties, Inc. (ISCP) in 1982, and has leased it to various tenants. The identity of these tenants, their use of the property, and their waste disposal practices are unknown. The Croton Egg Farm and an inactive emery mine are located to the west and to the north-northwest of the site, respectively. To the north, south, and east of the project site are residential areas. A wetland area is located between the site and the residential area southwest of the site.

2.3 Site Geology, Hydrogeology and Subsurface Characteristics

Topography is variable throughout the 0.5-mile radius from the site. Elevations range from 300 to 600 feet above mean sea level (MSL). On the former Magna Metals site, topography ranges from

360 feet MSL along the eastern site boundary to 320 feet MSL along the western site boundary. Stormwater drainage flows towards the west, following site topography, and drains into an unnamed tributary to Furnace Brook. The tributary flows south/southwest and discharges into a pond located in a large wetland area.

Stormwater on the former Magna Metals site leaves the site via overland flow and enters into the unnamed tributary. One catch basin was observed by Tetra Tech FW, Inc. (TTI) on the former site property. This basin is located in the central western portion of the site and collects discharge water from a roadway/parking area. The roadway is a mix of gravel and pavement. A search for the catch basin's outfall pipe was conducted along the unnamed tributary. An outfall pipe was not located. The stormwater collection system on Furnace Dock Road discharges into the unnamed tributary near the intersection of Furnace Dock Road and Gilman Lane.

The geologic characteristics of the subsurface conditions at the site consist primarily of a sandy to silty sand overburden unit, approximately 10 to 20 feet thick, overlying bedrock. The bedrock is mapped by the New York State Museum and Science Service as Hornblende Norite, which is a part of the Cortlandt Mafic Complex. Overburden groundwater exists in the form of a very shallow overburden aquifer (i.e., typically less than five feet in thickness). Groundwater flow from the site is in the western direction towards the stream and wetland area.

Results of slug tests completed by TTI indicate a range in hydraulic conductivity values from 5.3×10^{-5} cm/sec (or 0.16 ft/day) at MW-1 in the higher portion of the site to 2.2×10^{-3} cm/sec (6.2 ft/day) at MW-3 in the lower portion of the former leach pit area. Previous groundwater sampling by TTI indicated that some monitoring wells were observed to be dry during seasonal low groundwater conditions.

2.4 Review of Site History

Metal plating, polishing, and lacquering operations were conducted at the Magna Metals site from 1955 to 1979. During operation, iron, lead, copper, nickel, and zinc chlorides, cyanides, and sulfates were discharged to a series of leaching pits. Spent trichloroethylene (TCE) was drummed and removed. The site building is currently utilized as commercial rental space and includes three tenants: Polymedco, Inc., Motion Labs, Inc., and International Purchasing Systems. Polymedco, Inc. is a marketer and distributor of medical testing instruments and business activities include corporate management, laboratory testing of equipment, and warehouse storage. Motion Labs, Inc. is a development and manufacturing company specializing in electrical power distribution and motor/hoist control systems for rigging, lighting, staging and sound. International Purchasing Systems operates as a wholesale distributor of retail merchandise.

2.5 Previous Studies

Between 1978 and 1984, site investigations were completed by the NYSDOH, the NYSDEC, and William Cosulich Associates to determine if property uses had resulted in contamination. The investigations concluded that soil, groundwater, sediment, and, surface water contamination existed at the site. Between 1998 and 2009, several phases of investigation were completed by Foster Wheeler Environmental Corporation (predecessor to TTI), TTI, and AKRF to delineate the nature and extent of contamination, review the potential remedial options that could be performed, and to complete a vapor intrusion assessment at the site. Copies of reports containing the results for each phase of investigation are available for review at NYSDEC.

3.0 FIELD PROGRAM

The objective of the field-sampling program was to confirm that soil vapor intrusion is not occurring in office/warehouse building located east of the former Magna Metals building. The field procedures and sampling activities were completed in accordance with NYSDOH's Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006. The field program is outlined in Section 3.1, and the subsequent sections provide a summary of sampling implementation. The field program was conducted in accordance with the detailed methodologies described in the Soil Vapor Sampling Plan (SVSP), which was approved by the NYSDEC on August 21, 2009.

3.1 Field Program Summary

Site access for the property and study building was agreed upon between ISCP and the property owner/manager through an access agreement. Sub-slab soil-gas samples were collected at two locations and indoor air samples were collected at three locations from the lowest level of the Polymedco, Inc office building area. Figure 2 shows the project site building and the locations for soil gas sampling.

3.2 Pre-Sampling Survey

A pre-sampling survey was previously conducted on March 16, 2007, prior to initiating the March 2007 soil vapor sampling program. The survey was completed to document any factors that may affect indoor air quality and included interviews with building owners and/or building occupants, documentation of the building characteristics, air flow patterns, heating, venting and air conditioning, occupancy, water and sewage utilities, building operations, product inventory, and any other known factors that may affect indoor air quality. Copies of the NYSDOH Indoor Air Quality Questionnaire and Building Inventory forms and a summary of the inspection results were included in the June 2007 Soil Vapor Investigation Report. On February 21, 2008, a pre-sampling inspection walkthrough was complete prior to the March 2008 sampling event to document any material changes associated with facility operations, chemical storage, and/or structural/building components that may have occurred since the initial pre-sampling survey conducted in March 2007. Copies of the building inventory forms and a summary of the walk through results were included in the May 2008 Soil Vapor Investigation Report.

On January 19, 2011, AKRF completed a sampling inspection walkthrough of the Polymedco office to document any material changes associated with the facility and to confirm that the sampling locations were accessible. Mr. Steve Grens and Ms. Elizabeth Baird of AKRF were accompanied by Matt Hoskins of Environmental Resource Management (ERM). The building occupants and facility operations were observed to be unchanged from the previous inspection.

A photoionization detector (PID) capable of measuring in parts per billion (ppb) was used during the survey to sample ambient air for the presence of VOCs. Prior to conducting the survey, the PID was calibrated with 100 parts per million (ppm) isobutylene in accordance with the manufacturer's instructions. Compared to the previous pre-sampling inspections in February 2007, March 2008, March 2009, and January 2010, there were no observed changes to the building characteristics, air flow patterns, heating, venting and air conditioning, occupancy, water and sewage utilities, or building operations that would change the sampling parameters. A review of product storage areas indicated that product inventory was consistent with past inspections. A comprehensive product inventory of the Polymedco office is included in Appendix A. Photographs taken during the survey are included in Appendix B. The building layout and tenant locations on the entire property are shown on Figure 2.

Polymedco, Inc.

Polymedco occupied one section of the site building; the western section consisted of a one story office area (see Figure 2). There was no known chemical storage in the office area. The lab coats that were stored in the laboratory were reported as being laundered and not dry cleaned. The laboratory was observed to contain a refrigerated storage unit that stored reagents for control testing of the laboratory machines. The maintenance room contained shelved storage units that stored a variety of containerized chemicals and cleaning products. Items of note included buckets of paint, spray paint, turpentine, citrus degreaser, insect spray, varnish cleaner, greased lightning degreaser, wood polish, tiki-torch oil, metal polish, and spray adhesive. A locked storage cabinet was present in the storage room and contained an unknown amount and type of containerized chemicals. Organic vapors were not detected with the PID the chemical storage areas.

Sample Point/Sample Location Inspection

The two permanent sub-slab sample point locations (SV-11 and SV-12) were observed to be in good condition and were accessible. The three indoor air sampling locations (IA-10 through IA-12) that were confirmed by the NYSDEC in August 2009 were also accessible and cleared for sampling. The sampling locations are shown on Figure 2. The rationale for each sampling location is summarized as follows:

Soil Gas Well I.D.	Sampling Rationale
IA-10	Indoor air sample located in the southeastern corner of the office building
SV-11/IA-11	Soil gas investigation in the central area of the Polymedco office. Sub-slab point (SV-11) through floor in employee office. Indoor air sample (IA-11) on shelf in employee office.
SV-12/IA-12	Soil gas investigation in the south end of the Polymedco office area. Sub-slab point (SV-12) through concrete floor in lab coat closet. Indoor air sample (IA-12) on shelf in closet.

3.3 Sub-Slab Soil Gas Sampling

On January 19, 2011, AKRF conducted the field sampling program in accordance with the SVSP. AKRF personnel were accompanied by Matt Hoskins of ERM. Prior to initiating sample collection, each sub-slab sampling point was sealed, purged, and screened for the helium tracer gas and VOCs as indicated in the SVSP. Following purging, soil gas samples were collected for VOC analysis by connecting the sample tubing to a six-liter Summa canister equipped with a vacuum gauge and flow regulator set by the laboratory to collect a six-liter sample over an 8-hour sampling period. The sampling period was stopped after 8 hours or when the vacuum inside the summa canister was between 4 and 7 inches of mercury ("Hg). Photographs of the sampling process are included in Appendix B. Sampling logs are included in Appendix C. Field screening results and sampling parameters are summarized as follows:

Sample Location	Sample ID	PID Reading (ppm)	Helium Tracer Detection	Sampling Period (hrs)	Starting Vacuum ("Hg)	Ending Vacuum ("Hg)
SV-11	SS-11	8.6	No	7.25	29	5
SV-12	SS-12	72.2	No	8	28	15

3.4 Indoor Air Sampling

Indoor air samples (labeled IA-10 through IA-12 on Figure 2) were collected concurrently with the soil gas sampling. Sample IA-13 was collected as a duplicate of IA-12. All three indoor air sampling locations were placed in the locations confirmed by the NYSDOH in August 2009. The sampling was conducted in accordance with SVSP, and the parameters are summarized in the following table:

Sample ID	PID Reading (ppm)	Sampling Period (hrs)	Starting Vacuum ("Hg)	Ending Vacuum ("Hg)
IA-10	0	8	30	7
IA-11	0	7.25	28	6
IA-12	0	8	28	4
IA-13	0	8	27	16

3.5 Quality Assurance / Quality Control

In addition to the laboratory analysis of the field samples, additional analysis was included for quality control measures. These samples included one duplicate, reported as IA-13, collected at the indoor air location IA-12, and one background ambient (outdoor) air sample, reported as AA-1, which was collected on the southwestern corner of the building.

3.6 Laboratory Methods

The samples were analyzed for VOCs by EPA Method TO-15 with a detection limit of $1 \mu\text{g}/\text{m}^3$ for all compounds, except for trichloroethylene, which had a detection limit of $0.25 \mu\text{g}/\text{m}^3$ for indoor air samples. All sample analysis was performed by TestAmerica of South Burlington, Vermont, a NYSDOH Environmental Laboratory Approval Program (ELAP) laboratory certified to perform NYSDEC Analytical Services Protocol (ASP). The laboratory produced Category B deliverables. Samples were shipped to the laboratory with appropriate chain of custody documentation. The laboratory report is included in Appendix D.

4.0 ANALYTICAL RESULTS

4.1 Laboratory Results

Sub-Slab Samples

Sub-slab analytical results are summarized in Table 1. The sampling results from March 2007, March 2008, March 2009, and January 2010 are included in the table for comparison. Concentrations of detected VOCs were compared to the action level guidance values (from Matrix 1 and Matrix 2) of the NYSDOH Soil Vapor Intrusion Guidance and values in NYSDOH Summary of Indoor Levels of Volatile Organic Compounds from Fuel Oil Heated Homes in New York State, 1997-2003, which provides a means of comparison of indoor air to background conditions.

TCE detections of $1,300 \mu\text{g}/\text{m}^3$ and $65,000 \mu\text{g}/\text{m}^3$ were recorded at locations SV-11 and SV-12, respectively, above the action levels in Matrix 1. PCE was not detected in either of the SV-11 and SV-12 locations. Cis-1,2-dichloroethylene (DCE) was detected at locations SV-11 at concentrations of $9,800 \mu\text{g}/\text{m}^3$. 1,1,1-trichloroethane (TCA) and carbon tetrachloride were not

detected in any of the collected sub-slab samples. Toluene was detected in both samples with a maximum value of $470 \mu\text{g}/\text{m}^3$ at location SV-12. The laboratory results were consistent with the March 2007, March 2008, March 2009, and January 2010 sampling events.

Indoor Air Samples

Indoor air analytical results and guidance values included in Table 3.1 of the NYSDOH Soil Vapor Intrusion Guidance are included in Table 2. TCE was detected in the indoor air samples at concentrations ranging from 2.3 to $5.4 \mu\text{g}/\text{m}^3$. The concentration of TCE in sample IA-12 ($5.1 \mu\text{g}/\text{m}^3$) and IA-13 ($5.4 \mu\text{g}/\text{m}^3$) exceeded the NYSDOH guidance values of $5 \mu\text{g}/\text{m}^3$. IA-13 was a duplicate sample of IA-12. The concentration of TCE in sample IA-10 ($2.3 \mu\text{g}/\text{m}^3$) and IA-11 ($3.5 \mu\text{g}/\text{m}^3$) were below the NYSDOH guidance value. PCE was not detected in the four indoor air samples. Cis-1,2-DCE was detected in the indoor air samples at concentrations ranging from 0.17 to $0.34 \mu\text{g}/\text{m}^3$, which was below the Indoor Air Upper Fence value of $0.41 \mu\text{g}/\text{m}^3$. Toluene was detected at all locations, with the highest value of $2.3 \mu\text{g}/\text{m}^3$ in indoor air sample IA-11. Several aromatic VOCs, including benzene, ethylbenzene, and xylenes, were detected in the indoor samples at concentrations ranging from 0.25 to $1.1 \mu\text{g}/\text{m}^3$. Each of these compounds were not detected in the sub-slab samples and are not considered a result of vapor intrusion. Each of these compounds was also detected in the ambient air (outdoor) sample. Carbon tetrachloride was detected in all three indoor air samples at concentrations ranging from 0.32 to $0.42 \mu\text{g}/\text{m}^3$. This compound was also detected in the outdoor air sample at a concentration of $0.48 \mu\text{g}/\text{m}^3$ and is not considered to be a result of vapor intrusion. The remaining detections were at levels consistent with the outdoor air sample results and below the NYSDOH Upper Fence values.

5.0 SUMMARY OF FINDINGS

TCE was detected in indoor air sample IA-12 and IA-13 (duplicate of IA-12) at concentrations of 5.1 and 5.4 $\mu\text{g}/\text{m}^3$, which exceeded the indoor air guidance of 5 $\mu\text{g}/\text{m}^3$ in Table 3.1 of the NYSDOH Soil Vapor Intrusion Guidance. The remaining indoor air samples contained TCE at concentrations of 2.3 and 3.5 $\mu\text{g}/\text{m}^3$, which were below the NYSDOH's guidance for TCE. Elevated concentrations of TCE, and to a lesser extent several other volatile organic compounds, were detected in the sub-slab soil gas in both SV-11 and SV-12.

6.0 REFERENCES

Foster Wheeler Environmental Corporation; *Remedial Investigation/Feasibility Study (RI/FS), Magna Metals Site*, Cortlandt, New York; June 1998.

Tetra Tech FS, Inc.; *Draft Supplements Remedial Investigation Report, Magna Metals Site*, Cortlandt, New York; August 2004.

Tetra Tech EC, Inc.; *Data Findings From the Additional Data Collection Activities for the Former Magna Metals Site (NYSDEC Site No. 360003)*, Cortlandt, New York; June 2006.

New York State Department of Health, *Guidance for Evaluating Soil Vapor Intrusion in the State of New York*, October 2006.

New York State Department of Environmental Conservation, Division of Environmental Remediation, *DER-13/Strategy for Evaluating Soil Vapor Intrusion at Remedial Sites in New York*, October 2006.

New York State Department of Environmental Conservation, Division of Environmental Remediation, *Draft DER-10/Technical Guidance for Site Investigation and Remediation*, December 2002.

New York State Museum and Science Service Geological Survey, Map and Chart Series No. 15; *Geologic Map of New York, Lower Hudson Sheet, New York*; 1970; Reprinted 1995.

AKRF, Inc.; *Soil Vapor Intrusion Report, Magna Metals Site*, Cortlandt, New York, June 2007

AKRF, Inc.; *Soil Vapor Intrusion Report, Magna Metals Site*, Cortlandt, New York, May 2008

AKRF, Inc.; *Soil Vapor Intrusion Report, Magna Metals Site*, Cortlandt, New York, June 2009

AKRF, Inc.; *Soil Vapor Intrusion Report, Magna Metals Site*, Cortlandt, New York, April 2010

TABLES

Table 1
Magna Metals
 New York, NY
 Sub-Slab Soil Vapor Analytical Results

Sample Location	NYSDOH Soil Vapor Guidance Values Intrusion	NYSDOH Indoor Air Value Upper Fence	SV-11(S,S) JTPG31AD 4/5/2007	SV-11 742889 3/6/2008	SS-11 789544 3/17/2009 5	SS-11 818507 1/19/2010 12.8	SS-11 200-3486-3 1/19/2011 10
1,1,1-Trichloroethane	100/1000	2.5	8.7 U	6 U	5.5 U	45	11 U
1,1,2,2-Tetrachloroethane	NS	0.38	11 U	7.6 U	6.9 U	18 U	14 U
1,1,2-Trichloroethane	NS	0.38	8.7 U	8 U	5.5 U	14 U	11 U
1,1-Dichloroethane	NS	0.38	6.5 U	4.5 U	4 U	93	8.1 U
1,1-Dichloroethane	NS	0.4	6.3 U	4.4 U	4 U	10 U	7.9 U
1,2-Dibromoethane (EDB)	NS	0.38	12 U	8.5 U	7.7 U	20 U	15 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane	NS	0.42	11 U	7.7 U	7 U	18 U	14 U
1,2-Dichloroethane	NS	0.37	6.5 U	4.5 U	4 U	11 U	8.1 U
1,2-Dichloropropane	NS	0.39	7.4 U	5.1 U	4.6 U	12 U	9.2 U
1,3,5-Trimethylbenzene	NS	3.9	7.9 U	5.4 U	4.9 U	13 U	9.8 U
1,3-Butadiene	NS	0.49	7.1 U	6.2 U	5.5 U	14 U	4.4 U
2,2,4-Trimethylpentane	NS	NL	19 U	5.1 U	4.7 U	12 U	9.3 U
3-Chloropropene	NS	NL	5	8.8 U	7.8 U	20 U	16 U
4-Ethyltoluene	NS	NL	16 U	5.4 U	4.9 U	13 U	9.8 U
Benzene	NS	13	5.1 U	3.5 U	3.2 U	8.3 U	6.4 U
Bromodichloromethane	NS	NL	11 U	7.4 U	6.7 U	17 U	13 U
Bromomethane	NS	0.48	17 U	11 U	10 U	27 U	21 U
Carbon tetrachloride	650/250	1.3	6.2 U	4.3 U	3.9 U	10 U	7.8 U
Chloroethane	NS	0.39	5 U	6.9 U	6.3 U	16 U	13 U
Chloroform	NS	1.2	4.2 U	2.9 U	6.6 U	17 U	13 U
cis-1,2-Dichloroethane	NS	0.41	7.8 U	5.4 U	4.9 U	13 U	9.8 U
cis-1,3-Dichloropropene	NS	0.38	6.3 U	4.4 U	4 U	82	7.9 U
Cyclohexane	NS	6.3	7.3 U	5 U	4.5 U	12 U	9.1 U
Dibromochloromethane	NS	NL	14 U	9.4 U	8.5 U	22 U	17 U
Dichlorodifluoromethane	NS	10	7.9 U	14 U	12 U	43	25 U
Ethylbenzene	NS	6.4	6.9 U	4.8 U	4.3 U	11 U	8.7 U
Methyl tert-butyl ether	NS	14	29 U	10 U	9 U	23 U	22 U
m-Xylene & p-Xylene	NS	16	NA	9.7 U	8.7 U	22 U	7.2 U
n-Heptane	NS	11	16	4.8 U	11 U	22 U	17 U
n-Hexane	NS	18	16 U	4.5 U	4.1 U	11 U	8.2 U
o-Xylene	NS	14	84	9.9 U	8.8 U	23 U	7.0 U
Tetrachloroethene	100/1000	2.5	11 U	7.5 U	6.8 U	11 U	8.7 U
Toluene	NS	67	450	45	10	16	14
trans-1,2-Dichloroethene	NS	NL	6.3 U	4.4 U	4 U	10 U	7.9 U
trans-1,3-Dichloropropene	NS	0.4	7.3 U	5 U	4.5 U	12 U	9.1 U
Trichloroethene	550/250	0.46	1200	910	750	860	1300
Trichlorofluoromethane	NS	12	9 U	6.2 U	5.6 U	15	11 U
Vinyl bromide	NS	NL	7 U	4.8 U	4.4 U	11 U	NR
Vinyl chloride	NS	0.37	4.1 U	2.8 U	2.6 U	6.6 U	5.1 U

NS - No Standard. NL - Not listed. NR - Not reported.
 * - Recovery or RCD exceeds control limits.
 ^ - Instrument related QC exceeds the control limits.
 Soil vapor guidance values for monitoring and mitigation presented in Matrices 1 & 2 of
 New York State Department of Health Guidance for Evaluating Soil Vapor Intrusion in
 the State of New York, October 2006.

Table 1
Magna Metals
 New York, NY
 Sub-Slab Soil Vapor Analytical Results

Sample Location Sample ID Lab Sample ID Date Sampled Dilution	NYSDOH Soil Vapor Guidance Values Intrusion	NYSDOH Indoor Air Value Upper Fence	SV-12(S,S) JTPH-IAD 4/6/2007	SV-12 742892 3/6/2008	SV-12 (Polymedco Office) SS-12 789545 3/17/2009 734	SS-12 818510 1/19/2010 401	SS-12 200-3486-5 1/19/2011 522	SS-16 789553 3/17/2009 557 (Duplicate of SS-12)
1,1,1-Trichloroethane	100/1000	2.5	680 U	500 U	820 U	440 U	570 U	710 U
1,1,2,2-Tetrachloroethane	NS	0.38	860 U	760 U	1000 U	550 U	720 U	880 U
1,1,2-Trichloroethane	NS	0.38	680 U	600 U	820 U	440 U	570 U	710 U
1,1-Dichloroethane	NS	0.38	500 U	450 U	610 U	320 U	420 U	530 U
1,1-Dichloroethane	NS	0.4	490 U	440 U	590 U	360 U	410 U	520 U
1,2-Dibromoethane (EDB)	NS	0.38	960 U	850 U	1200 U	610 U	800 U	1000 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane	NS	0.42	870 U	770 U	1000 U	560 U	730 U	910 U
1,2-Dichloroethane	NS	0.37	500 U	450 U	610 U	320 U	420 U	530 U
1,2-Dichloropropane	NS	0.39	580 U	510 U	690 U	370 U	480 U	600 U
1,3,5-Trimeethylbenzene	NS	3.9	610 U	540 U	740 U	390 U	510 U	640 U
1,3-Butadiene	NS	0.49	550 U	600 U	820 U	440 U	230 U	730 U
2,2,4-Trimethylpentane	NS	NL	1500 U	510 U	700 U	370 U	480 U	610 U
3-Chloropropene	NS	NL	390 U	850 U	1200 U	630 U	820 U	1000 U
4-Ethyltoluene	NS	NL	1200 U	540 U	740 U	390 U	510 U	640 U
Benzene	NS	13	400 U	350 U	480 U	260 U	330 U	420 U
Bromodichloromethane	NS	NL	840 U	740 U	1000 U	540 U	700 U	870 U
Bromoforn	NS	NL	1300 U	1100 U	1600 U	830 U	1100 U	1300 U
Bromomethane	NS	0.48	480 U	430 U	580 U	310 U	410 U	500 U
Carbon tetrachloride	6/60/250	1.3	390 U	690 U	940 U	500 U	660 U	820 U
Chloroethane	NS	0.39	330 U	290 U	980 U	530 U	680 U	870 U
Chloroform	NS	1.2	610 U	540 U	730 U	390 U	510 U	630 U
cis-1,2-Dichloroethane	NS	0.41	1100 U	1100 U	1800 U	1300 U	980 U	1600 U
cis-1,3-Dichloropropene	NS	0.38	570 U	500 U	680 U	360 U	470 U	590 U
Cyclohexane	NS	6.3	1100 U	520 U	520 U	280 U	360 U	450 U
Dibromochloromethane	NS	NL	940 U	940 U	1300 U	680 U	880 U	1100 U
Dichlorodifluoromethane	NS	10	620 U	1300 U	1800 U	980 U	1300 U	1600 U
Ethylbenzene	NS	6.4	540 U	480 U	650 U	350 U	450 U	560 U
Methyl tert-butyl ether	NS	14	2200 U	970 U	1300 U	720 U	1100 U	1200 U
Methylene Chloride	NS	16	NA	940 U	1300 U	690 U	380 U	1100 U
m-Xylene & p-Xylene	NS	11	540 U	480 U	1600 U	690 U	910 U	1400 U
n-Heptane	NS	18	1300 U	450 U	610 U	330 U	430 U	530 U
n-Hexane	NS	14	1400 U	950 U	1300 U	700 U	370 U	1200 U
o-Xylene	NS	7.1	540 U	480 U	650 U	350 U	450 U	560 U
Tetrachloroethene	100/1000	2.5	850 U	750 U	1000 U	540 U	710 U	880 U
Toluene	NS	57	3300 U	6800 U	980 U	1500 U	470 U	940 U
trans-1,2-Dichloroethane	NS	NL	490 U	440 U	590 U	320 U	410 U	520 U
trans-1,3-Dichloropropene	NS	0.4	570 U	500 U	680 U	360 U	470 U	590 U
Trichloroethane	5/60/250	0.46	6500 U	9700 U	13000 U	8100 U	6500 U	11000 U
Trichlorofluoromethane	NS	12	700 U	620 U	840 U	450 U	580 U	730 U
Vinyl bromide	NS	NL	550 U	480 U	650 U	350 U	NR	570 U
Vinyl chloride	NS	0.37	320 U	280 U	380 U	200 U	270 U	330 U

NS - No Standard. NL - Not listed. NR - Not reported.
 - - Recovery or RCD exceeds control limits.
 - - Instrument related QC exceeds the control limits.
 Soil vapor guidance values for monitoring and mitigation presented in Matrices 1 & 2
 New York State Department of Health Guidance for Evaluating Soil Vapor Intrusion in
 the State of New York, October 2006.

Table 2
Magna Metals
 New York, NY
 Outdoor and Indoor Air Analytical Results

Sample Location Sample ID Lab Sample ID Date Sampled Dilution	NYSDOH Indoor Air Guidance Value	NYSDOH Indoor Air Upper Fence Value	Outdoor Location 1				
			outdoor 1(AA) JTPLM1AD 4/5/2007	AA-1 74286 3/6/2008	AA-1 789540 3/17/2009 4	AA-1 818508 1/19/2010 4	AA-1 200-3486-7 1/19/2011 4
1,1,1-Trichloroethane µg/m ³	5	2.5	0.44 U	0.22 U	0.22 U	0.22 U	0.22 U
1,1,2-Trichloroethane	NS	0.38	0.55 U	0.27 U	0.27 U	0.27 U	0.27 U
1,1,2-Trichloroethane	NS	0.38	0.44 U	0.22 U	0.22 U	0.22 U	0.22 U
1,1-Dichloroethane	NS	0.38	0.32 U	0.16 U	0.16 U	0.16 U	0.16 U
1,1-Dichloroethane	NS	0.4	0.32 U	0.16 U	0.16 U	0.16 U	0.16 U
1,2-Dibromoethane (EDB)	NS	0.38	0.61 U	0.31 U	0.31 U	0.31 U	0.31 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane	NS	0.42	0.56 U	0.28 U	0.28 U	0.28 U	0.28 U
1,2-Dichloropropane	NS	0.37	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
1,3,5-Trimethylbenzene	NS	0.39	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
1,3-Butadiene	NS	0.49	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U
2,2,4-Trimethylpentane	NS	NL	0.93 U	0.19 U	0.19 U	0.75	0.46
3-Chloropropene	NS	NL	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
4-Ethyltoluene	NS	NL	0.79 U	0.2 U	0.2 U	0.2 U	0.20 U
Benzene	NS	13	0.48	0.48	0.54	1.9	1.1
Bromodichloromethane	NS	0.48	0.54 U	0.27 U	0.27 U	0.27 U	0.27 U
Bromoform	NS	NL	0.83 U	0.41 U	0.41 U	0.41 U	0.41 U
Bromomethane	NS	0.48	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Carbon tetrachloride	100	1.3	0.51	0.35	0.56	0.6	0.48
Chloroethane	NS	0.39	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Chloroform	NS	1.2	0.39 U	0.2 U	0.2 U	0.2 U	0.20 U
cis-1,2-Dichloroethene	NS	0.41	0.32 U	0.16 U	0.16 U	0.16 U	0.16 U
cis-1,3-Dichloropropene	NS	0.38	0.36 U	0.18 U	0.18 U	0.18 U	0.18 U
Cyclohexane	NS	6.3	0.69 U	1.2	0.22	0.3	0.17
Dibromochloromethane	NS	NL	0.68 U	0.34 U	0.34 U	0.34 U	0.34 U
Dichlorodifluoromethane	NS	10	2.2	2	3.3	3.2	2.9
Ethylbenzene	NS	6.4	0.35 U	0.26 U	0.17 U	0.52	0.26
Methyl tert-butyl ether	NS	14	1.4 U	0.14 U	0.14 U	0.14 U	0.14 U
Methylene Chloride	NS	16	NA	2.8 U	2.8 U	2.8 U	2.8 U
m-Xylene & p-Xylene	NS	11	0.42	0.96	0.37	1.5	0.71
n-Heptane	NS	18	0.82 U	1.1	0.34	0.57	0.37
n-Hexane	NS	14	0.7 U	0.35	0.53	1.1	0.64
o-Xylene	NS	7.1	0.35 U	0.25	0.17 U	0.52	0.26
Tetrachloroethene	100	2.5	0.54 U	0.28	0.27 U	0.48	0.32
Toluene	NS	57	0.97	0.98	0.75	3.3	1.8
trans-1,2-Dichloroethene	NS	NL	0.32 U	0.16 U	0.16 U	0.16 U	0.16 U
trans-1,3-Dichloropropene	NS	0.4	0.36 U	0.18 U	0.18 U	0.18 U	0.18 U
Trichloroethene	5	0.46	0.21 U	0.21 U	0.25	0.21 U	0.21 U
Trichlorofluoromethane	NS	12	1.3	0.84	1.6	1.6	1.3
Vinyl bromide	NS	NL	0.33 U	0.35 U	0.35 U	0.35 U	NR
Vinyl chloride	NS	0.37	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U

NS - No standard. NL - Not listed. NR - Not reported.
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 Evaluating Soil Vapor Intrusion in the State of New York, October 2006.

Table 2
Magna Metals
New York, NY
Outdoor and Indoor Air Analytical Results

Sample Location Sample ID Lab Sample ID Date Sampled Dilution	NYSDOH Indoor Air Guidance Value	NYSDOH Indoor Air Upper Fence Value	Polymedco Southern Lab Room				
			IA-10 742893 3/6/2008	IA-19 742894 3/6/2008 (Duplicate of IA-10)	IA-10 789542 3/17/2009 4	IA-10 818512 1/19/2010 4	IA-10 200-3486-1 1/19/2011 4
1,1,1-Trichloroethane	5	2.5	0.22 U	45	0.33	0.22 U	0.22 U
1,1,2,2-Tetrachloroethane	NS	0.38	0.27 U	18 U	0.27 U	0.27 U	0.27 U
1,1,2-Trichloroethane	NS	0.38	0.22 U	14 U	0.22 U	0.22 U	0.22 U
1,1-Dichloroethane	NS	0.38	0.16 U	93	0.16 U	0.16 U	0.16 U
1,1-Dichloroethane	NS	0.4	0.16 U	10 U	0.16 U	0.16 U	0.16 U
1,2-Dibromoethane (EDB)	NS	0.38	0.31 U	20 U	0.31 U	0.31 U	0.31 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane	NS	0.42	0.28 U	18 U	0.28 U	0.28 U	0.28 U
1,2-Dichloroethane	NS	0.37	0.32 U	11 U	0.32 U	0.32 U	0.32 U
1,2-Dichloropropane	NS	0.39	0.37 U	12 U	0.37 U	0.37 U	0.37 U
1,3,5-Trimethylbenzene	NS	3.9	5.9	13 U	0.42	0.39 U	0.39 U
1,3-Butadiene	NS	0.49	0.27	14 U	0.18 U	0.18 U	0.18 U
2,2,4-Trimethylpentane	NS	NL	1.4	12 U	0.19 U	0.43	0.30
3-Chloropropene	NS	NL	0.25 U	20 U	0.25 U	0.25 U	0.25 U
4-Ethyltoluene	NS	NL	5.9	13 U	0.2	0.2 U	0.20 U
Benzene	NS	13	1.7	8.3 U	0.48	1.2	0.80
Bromodichloromethane	NS	NL	0.27 U	17 U	0.27 U	0.27 U	0.27 U
Bromoform	NS	NL	0.41 U	27 U	0.41 U	0.41 U	0.41 U
Bromomethane	NS	0.48	0.31 U	10 U	0.31 U	0.31 U	0.31 U
Carbon tetrachloride	100	1.3	0.62	16 U	0.49	0.53	0.32
Chloroethane	NS	0.39	0.21 U	17 U	0.21 U	0.21 U	0.21 U
Chloroform	NS	1.2	0.2 U	13 U	0.34	0.2 U	0.20 U
cis-1,2-Dichloroethane	NS	0.41	0.36	87	0.21	0.19	0.17
cis-1,3-Dichloropropene	NS	0.38	0.18 U	12 U	0.18 U	0.18 U	0.18 U
Cyclohexane	NS	6.3	0.41	13	0.83	0.24	0.20
Dibromochloromethane	NS	NL	0.34 U	22 U	0.34 U	0.34 U	0.34 U
Dichlorodifluoromethane	NS	10	3.2	43	3.5	3.6	1.8
Ethylbenzene	NS	6.4	6.5	11 U	0.24	0.43	0.25
Methyl tert-butyl ether	NS	14	0.14 U	23 U	0.14 U	0.14 U	0.14 U
Methylene Chloride	NS	16	2.8 U	22 U	2.8 U	2.8 U	2.8 U
m-Xylene & p-Xylene	NS	11	27	22 U	0.56	1.2	0.70
n-Heptane	NS	18	1.3	11 U	0.45	0.53	0.31
n-Hexane	NS	14	1.1	23 U	0.35	1.2	0.44
o-Xylene	NS	7.1	12	11 U	0.23	0.39	0.24
Tetrachloroethane	NS	2.6	0.58	18 U	0.27 U	0.37	0.27 U
Toluene	NS	57	14	16	1.6	3	1.7
trans-1,2-Dichloroethane	NS	NL	0.3	87	0.18 U	0.18 U	0.16 U
trans-1,3-Dichloropropene	NS	0.4	0.18 U	12 U	0.18 U	0.18 U	0.18 U
Trichloroethane	5	0.46	4.8	860	2.4	2	2.3
Trichlorofluoromethane	NS	12	1.6	15	1.4	1.6	0.86
Vinyl bromide	NS	NL	0.35 U	11 U	0.35 U	0.35 U	NR
Vinyl chloride	NS	0.37	0.2 U	6.6 U	0.2 U	0.2 U	0.20 U

NS - No standard. NL - Not listed. NR - Not reported.
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Table 2
Magna Metals
 New York, NY
 Outdoor and Indoor Air Analytical Results

Sample Location Sample ID Lab Sample ID Date Sampled Dilution	NYSDOH Indoor Air Guidance Value	NYSDOH Indoor Air Fence Value	SV-11 (Polymedco Office)				
			SV-11(A) JTPHATAD 4/5/2007	IA-11 742890 3/6/2008	IA-11 789543 3/17/2009 ⁴	IA-11 818509 1/19/2010 ⁴	IA-11 200-3486-2 1/19/2011 ⁴
1,1,1-Trichloroethane	5	2.5	0.44 U	0.22 U	0.41	0.22 U	0.22 U
1,1,2,2-Tetrachloroethane	NS	0.38	0.55 U	0.27 U	0.27 U	0.22 U	0.27 U
1,1,2-Trichloroethane	NS	0.38	0.44 U	0.22 U	0.22 U	0.22 U	0.22 U
1,1-Dichloroethane	NS	0.38	0.32 U	0.16 U	0.16 U	0.16 U	0.16 U
1,1-Dichloroethane	NS	0.4	0.32 U	0.16 U	0.16 U	0.16 U	0.16 U
1,2-Dibromoethane (EDB)	NS	0.38	0.51 U	0.31 U	0.31 U	0.31 U	0.31 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane	NS	0.42	0.36 U	0.28 U	0.28 U	0.28 U	0.28 U
1,2-Dichloroethane	NS	0.37	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
1,2-Dichloropropane	NS	0.39	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
1,3,5-Trimethylbenzene	NS	3.9	1.2	0.45	0.54	0.45	0.39 U
1,3-Butadiene	NS	0.49	0.35 U	0.18 U	0.18 U	0.31	0.24
2,2,4-Trimethylpentane	NS	NL	0.93 U	0.19 U	0.19 U	0.61	0.41
3-Chloropropene	NS	NL	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
4-Ethyltoluene	NS	NL	0.79 U	0.59	0.26	0.29	0.21
Benzene	NS	13	0.55	0.51	0.61	1.6	1.1
Bromodichloromethane	NS	NL	0.54 U	0.27 U	0.27 U	0.27 U	0.27 U
Bromoform	NS	NL	0.83 U	0.41 U	0.41 U	0.41 U	0.41 U
Bromomethane	NS	0.48	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Carbon tetrachloride	100	1.3	0.53	0.31	0.56	0.63	0.42
Chloroethane	NS	0.39	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Chloroform	NS	1.2	0.39 U	0.2 U	0.46	0.2	0.20 U
cis-1,2-Dichloroethane	NS	0.41	0.32 U	0.16 U	0.26	0.36	0.24
cis-1,3-Dichloropropene	NS	0.38	0.36 U	0.18 U	0.18 U	0.18 U	0.18 U
Cyclohexane	NS	6.3	0.69 U	0.25	0.38	0.34	0.39
Dibromochloromethane	NS	NL	0.68 U	0.34 U	0.34 U	0.34 U	0.34 U
Dichlorodifluoromethane	NS	10	2.3	2.6	3	3.9	2.8
Ethylbenzene	NS	6.4	1.4 U	0.14 U	0.22	0.52	0.36
Methyl tert-butyl ether	NS	14	1.4 U	0.14 U	0.14 U	0.14 U	0.14 U
Methylene Chloride	NS	16	NA	2.8 U	2.8 U	2.8 U	2.8 U ^a
m-Xylene & p-Xylene	NS	11	1.4	0.78	0.56	1.5	0.96
n-Heptane	NS	18	1.7	1.2	0.66	0.94	0.64
n-Hexane	NS	14	0.7 U	0.56	0.42	1.2	0.64
o-Xylene	NS	7.1	0.6	0.23	0.25	0.52	0.35
Tetrachloroethene	100	2.6	0.54 U	0.52	0.27 U	0.52	0.27 U
Toluene	NS	57	3.6	1.5	2	3.8	2.3
trans-1,2-Dichloroethene	NS	NL	0.32 U	0.16 U	0.16 U	0.16 U	0.16 U
trans-1,3-Dichloropropene	NS	0.4	0.36 U	0.18 U	0.18 U	0.18 U	0.18 U
Trichloroethene	5	0.46	2.2	1.6	3	4.5	3.5
Trichlorofluoromethane	NS	12	1.3	1	1.3	1.8	1.2
Vinyl bromide	NS	NL	0.35 U	0.35 U	0.35 U	0.35 U	NR
Vinyl chloride	NS	0.37	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U ^a

NS - No standard. NL - Not listed. NR - Not reported.
^a - Recovery or RCD exceeds control limits.
^a - Instrument related QC exceeds the control limits.
 Soil vapor guidance values for monitoring and mitigation presented in
 Matrices 1 & 2 of New York State Department of Health Guidance for
 Evaluating Soil Vapor Intrusion in the State of New York, October 2006.

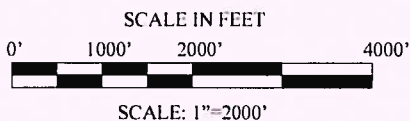
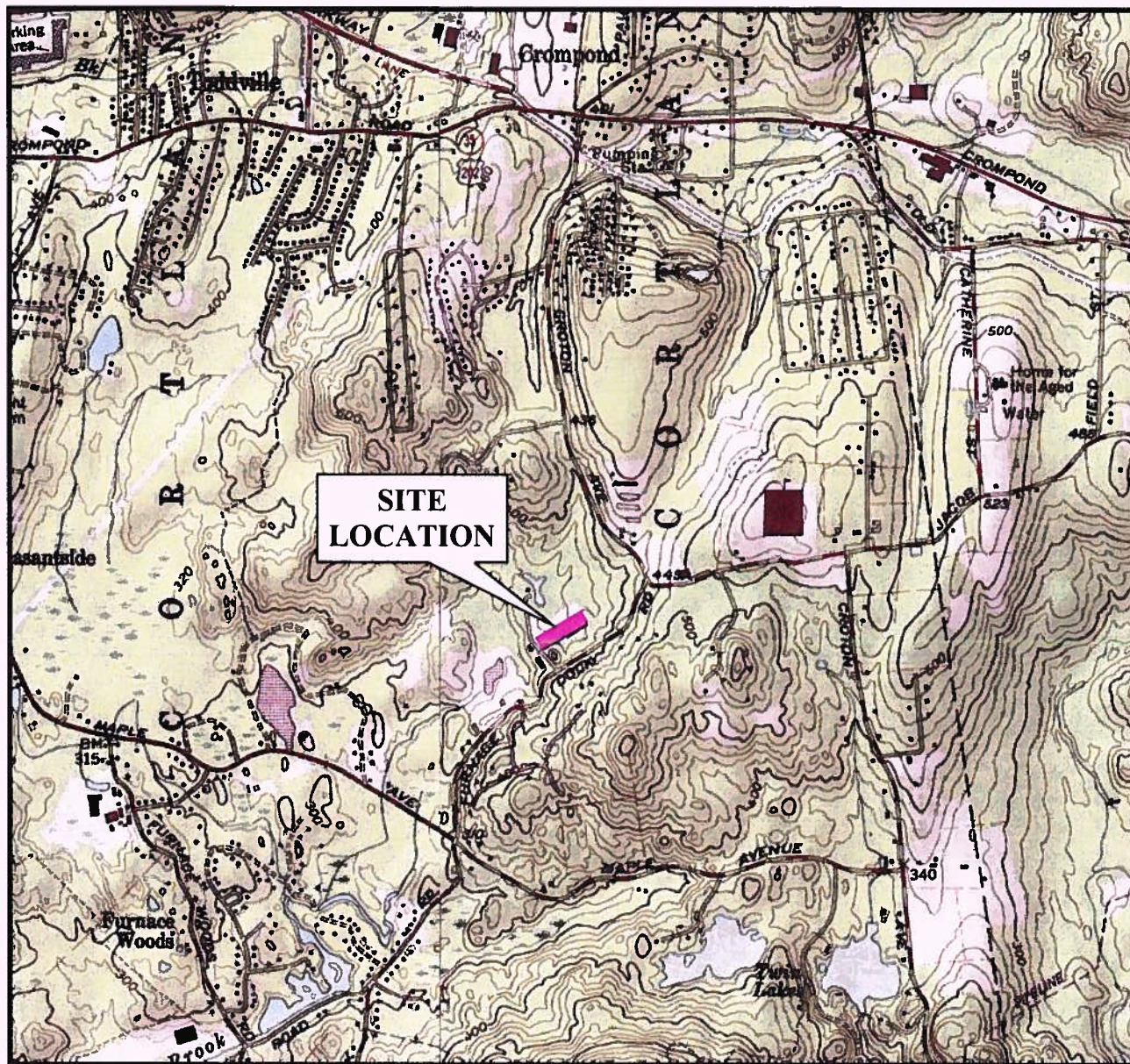
Table 2
Magna Metals
New York, NY
Outdoor and Indoor Air Analytical Results

Sample Location	NYSDOH Indoor Air Guidance Value	NYSDOH Indoor Air Upper Fence Value	SV-12 (Polymedco Office)						
Sample ID Lab Sample ID Date Sampled Dilution			SV-12(A)A JTPHX1AD 4/5/2007	IA-12 742891 3/6/2008	IA-12 789546 3/17/2009 4	IA-12 818512 1/19/2010 4	IA-12 200-3486-4 1/19/2011 4	IA-13 818513 1/19/2010 4 (Duplicate of IA-12)	IA-13 200-3486-6 1/19/2011 3.99 (Duplicate of IA-12)
µg/m ³	µg/m ³	µg/m ³							
1,1,1-Trichloroethane	5	2.5	0.44 U	0.22 U	0.41	0.22 U	0.22 U	0.22 U	0.22 U
1,1,2,2-Tetrachloroethane	NS	0.38	0.55 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,1,2-Trichloroethane	NS	0.38	0.44 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,1-Dichloroethane	NS	0.38	0.32 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
1,1-Dichloroethane	NS	0.4	0.32 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
1,2-Dibromoethane (EDB)	NS	0.38	0.61 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane	NS	0.42	0.56 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
1,2-Dichloroethane	NS	0.37	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
1,2-Dichloropropane	NS	0.39	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
1,3,5-Trimethylbenzene	NS	3.9	0.78	0.39 U	0.39 U	5.9	0.39 U	5.9	0.39 U
1,3-Butadiene	NS	0.49	0.35 U	0.18 U	0.18 U	0.27	0.18	0.27	0.22
2,2,4-Trimethylpentane	NS	NL	0.93 U	0.19 U	0.28	1.1	0.32	1.4	0.35
3-Chloropropene	NS	NL	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
4-Ethyltoluene	NS	NL	0.79 U	0.54	0.2 U	7.4	0.20 U	5.9	0.20 U
Benzene	NS	13	0.71	0.42	0.58	1.5	0.79	1.7	0.86
Bromodichloromethane	NS	NL	0.54 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Bromoforn	NS	NL	0.83 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
Bromomethane	NS	0.48	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Carbon tetrachloride	NS	100	0.51	0.38	0.52	0.54	0.38	0.62	0.38
Chloroethane	NS	0.39	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Chloroform	NS	1.2	0.39 U	0.2 U	0.38	0.2 U	0.20 U	0.2 U	0.19 U
cis-1,2-Dichloroethane	NS	0.41	0.32 U	0.23	0.35	0.48	0.34	0.36	0.31
cis-1,3-Dichloropropene	NS	0.38	0.36 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Cyclohexane	NS	6.3	0.69 U	0.14 U	0.76	0.34	0.16	0.41	0.17
Dibromochloromethane	NS	NL	0.68 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
Dichlorodifluoromethane	NS	10	2.2	2.5	3.4	3	2.4	3.2	2.4
Ethylbenzene	NS	6.4	0.62	0.17 U	0.29	5.2	0.34	6.5	0.35
Methyl tert-butyl ether	NS	14	1.4 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Methylene Chloride	NS	16	NA	2.8 U	2.8 U	2.8 U	2.8 U ^a	2.8 U	2.8 U ^a
m-Xylene & p-Xylene	NS	11	1.9	0.41	0.78	22	0.98	27	0.95
n-Heptane	NS	18	0.82 U	2	1.3	1	0.39	1.3	0.53
n-Hexane	NS	14	0.7 U	0.28 U	1.4	1	0.50	1.1	0.71
o-Xylene	NS	7.1	0.59	0.17 U	0.37	10	0.30	12	0.33
Tetrachloroethene	NS	100	0.54 U	0.55	0.27 U	0.65	0.27 U	0.58	0.27 U
Toluene	NS	57	4	1.5	2.3	11	1.6	14	1.7
trans-1,2-Dichloroethane	NS	NL	0.32 U	0.16 U	0.16 U	0.2	0.16 U	0.3	0.16 U
trans-1,3-Dichloropropene	NS	0.4	0.36 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Trichloroethene	5	0.46	2.9	3.6	4	5.1	5.1	4.8	5.4
Trichlorofluoromethane	NS	12	1.7	1	1.5	1.5	1.0	1.6	1.1
Vinyl bromide	NS	NL	0.35 U	0.35 U	0.35 U	0.35 U	NR	0.35 U	NR
Vinyl chloride	NS	0.37	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U ^a	0.2 U	0.20 U ^a

NS - No standard. NL - Not listed. NR - Not reported.
 * - Recovery or RCD exceeds control limits.
 ^ - Instrument related QC exceeds the control limits.
 Soil vapor guidance values for monitoring and mitigation presented in
 Matrices 1 & 2 of New York State Department of Health Guidance for
 Evaluating Soil Vapor Intrusion in the State of New York, October 2006.

FIGURES

© 2007 AKRF Inc. Environmental Consultants Q:\Westchester Data\AKRFData\40256\ISCP Properties-Cortland\Figures\40256 Fig 1 loc map pub



SOURCE:
7.5 MINUTE SERIES USGS TOPOGRAPHIC MAP
QUADRANGLE: MOHEGAN LAKE, NY 1981

**MAGNA METALS
CORTLANDT, NEW YORK**

PROJECT SITE LOCATION

AKRF

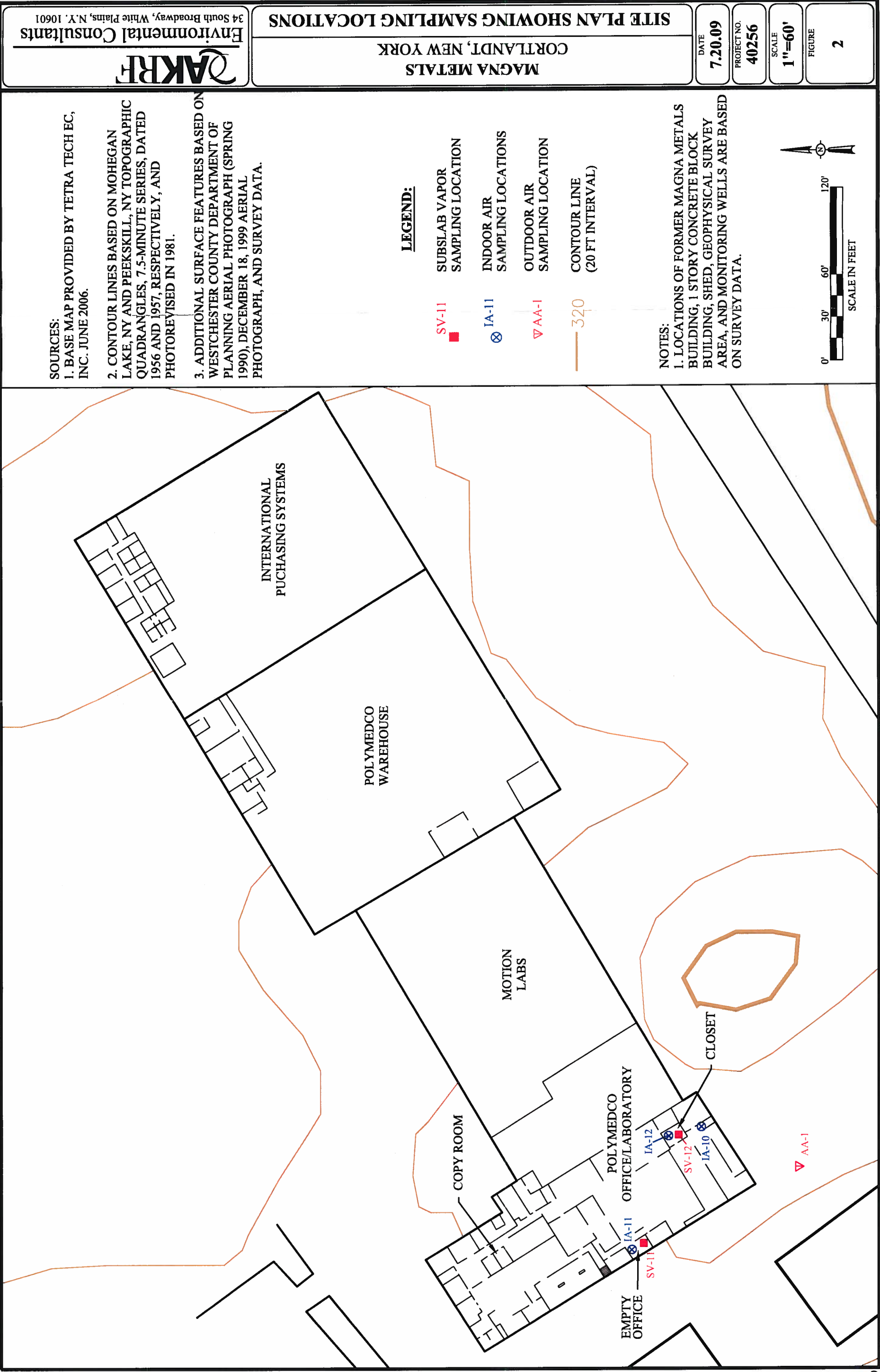
Environmental Consultants
440 Park Avenue South, New York, N.Y. 10016

DATE
1.08.06

PROJECT No.
40256

SCALE
AS SHOWN

FIGURE
1



APPENDIX A
POLYMEDCO PRODUCT INVENTORY FORM

13. PRODUCT INVENTORY FORM – Polymedco Office

Make & Model of field instrument used: ppBRAE Model PGM-7240

List of specific products found at the site that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition	Chemical Ingredients	Field Instrument Reading (units)	Photo <u>Y/N</u>
Maintenance Room	Clorox – Disinfecting Wipes	8	U/UO	NA	0	Y
	Lysol – Disinfectant Spray	6	UO	NA	0	Y
	Crown Janitorial Products	5	UO	Alakine lomine	0	Y
	Pledge – Wood Polish	2	U/UO	NA	0	Y
	Windex – Window Cleaner	3	U/UO	NA	0	Y
	ZEP – Cleaner and Degreaser	2	U/UO	NA	0	Y
	Murphy – Oil Soap	3	U/UO	NA	0	Y
	Amorall Carpet and Upholstery Cleaner	1	U	Isopropyl alcohol	0	Y
	Sheetrock Joint Compound	1	U	Vinyl acetate monomer, acetaldehyde, formaldehyde	0	Y
	RugDoctor – Steam Cleaner	1	U	NA	0	Y
	ZEP – High Traffic Carpet Cleaner	1	UO	NA	0	Y
	Resolve – Spot and Stain Remover	2	UO	NA	0	Y
	WD-40	1	U	Petroleum Distillates	0	Y
	Zep – Toilet Bowl Cleaner	9	U/UO	NA	0	Y
	Glade – Air Freshener	6	U/UO	NA	0	Y
	Sta-Put Plumbers Putty	1	U	NA	0	Y
	Spectro – Wasp and Hornet Killer	4	U/UO	Propane, heptane, chlorpyrifos	0	Y
	Henry Co – Base Adhesive	1	U	NA	0	Y

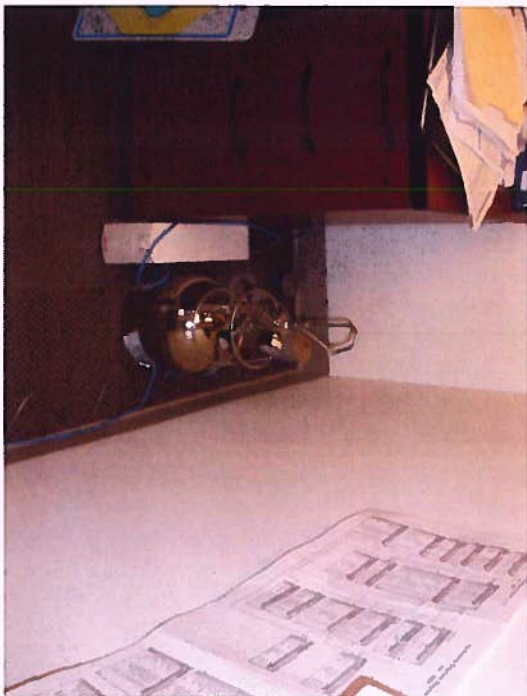
Maintenance Room	Winter Warrior De-Icer	3	UO	NA	0	Y
	Turtle Wax – Bug, Tar, and Tree Sap Remover	1	U	NA	0	Y
	SoftSoap – Hand Soap	6	U/UO	Trichlosan, methyl glucose	0	Y
	Febreze – Air Freshener	3	U/UO	NA	0	Y
	Real Kill –Home Insect Control	1	U	Propane, heptane, chlorpyrifos	0	Y
	Ajax – Bleach Cleanser	4	U/UO	Chlorine	0	Y
	Swiffer Wet Jet	6	U/UO	Solvents	0	Y
	Endust	5	U/UO	Naptha, paraffinic, propane, 2-methyl, solvents	0	Y
	Raid – Ant and Roach Killer	1	UO	Propane, heptane, chlorpyrifos	0	Y
	Strait Line – Marking Chalk	2	UO	NA	0	Y
	Minwax – Wood Stain	1	U	Solvents	0	Y
	BEHR Latex Paint	11	U/UO	Ethylene glycol	0	Y
	Benjamin Moore Latex Paint	2	U/UO	Ethylene glycol	0	Y
	Kimcare – Lotion Soap	4	U	NA	0	Y
	Isopropyl alcohol	3	UO	Isopropyl alcohol	0	Y
	Spray Paint	10	U/UO	Propane, butane, toluene, acetone, 2-methyl-1-propanol	0	Y
	Dirtex	1	UO	2-butoxyethanol, ammonia	0	Y
	Guardsmen – Wood Cleaner	1	U	Petroleum distillates	0	Y
	Expo – White Board Cleaner	1	UO	Isopropyl, ethanol	0	Y
	Vacuum Pump Oil 19	3	U/UO	Solvents, paraffin oil	0	Y
	Clorox Bleach	3	UO	Sodium hydrochloride, chlorine	0	Y
	Soft Scrub – Bleach Cleanser	1	UO	NA	0	Y
	Stop & shop – Pure Power Fabric	1	U/UO	Alcohol	0	Y

	Refresher					
	MinWax – Polyurethane	4	U/UO	Aliphatic hydrocarbons	0	Y
	Acrylic Pro-Ceramic Tile Adhesive	1	UO	Petroleum distillates	0	Y
	High Performance Water-Based Epoxy	1	UO	Tetraethylene Pentamine, Ethylenediamine, Propylene glycol monomethyl, glycol ether, 2-butoxyethanol	0	Y
	CLR – Calcium, Rust, and Lyme Remover	1	U	NA	0	Y
	Great Stuff – Insulating Foam Sealant	1	D	Methyl ether, propane, isobutane	0	Y
	Henry Carpet and Sheet Vinyl	1	U	Petroleum distillates	0	Y
	Premixed Tile Grout	1	UO	Ethylene glycol	0	Y
	Non-Acid Disinfectant Bathroom Cleaner	1	U	Ammonium chloride	0	Y
	Jasco – Floor Patch and Level Compound	1	UO	Silica quartz, acrylic styrene polymer, methanol	0	Y
	Turtle Wax – Carpet Cleaner	1	UO	Oxygen containing surfactants	0	Y
Storage Closet	Printer Cartridges and Toners	Several	UO	NA	0	Y

APPENDIX B
PHOTOGRAPHIC LOG

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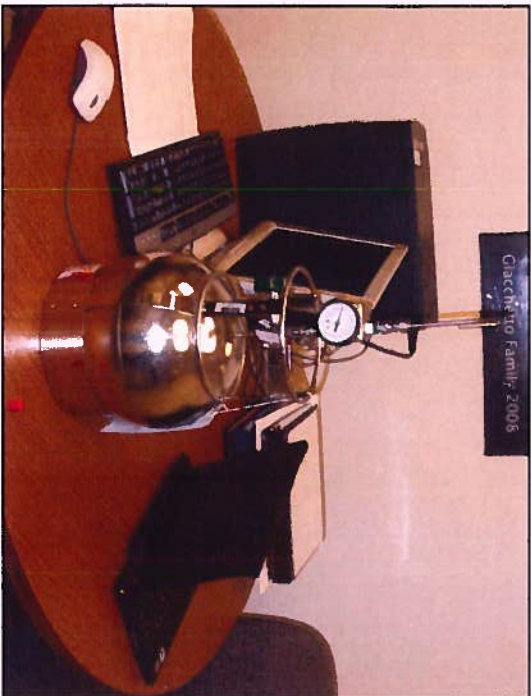
Magna Metals
Cortlandt, New York



Photograph 1: Soil vapor sampling location SV-11.



Photograph 2: Purging set-up with helium tracer gas at SV-12.



Photograph 3: Indoor air sampling IA-11.



Photograph 4: Ambient air sampling AA-1.

AKRF, Inc.

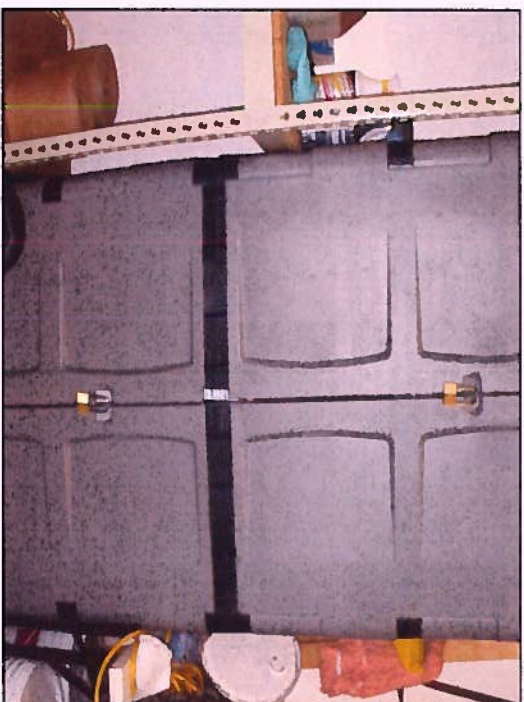


Photograph 5: Maintenance room of Polymedco office.

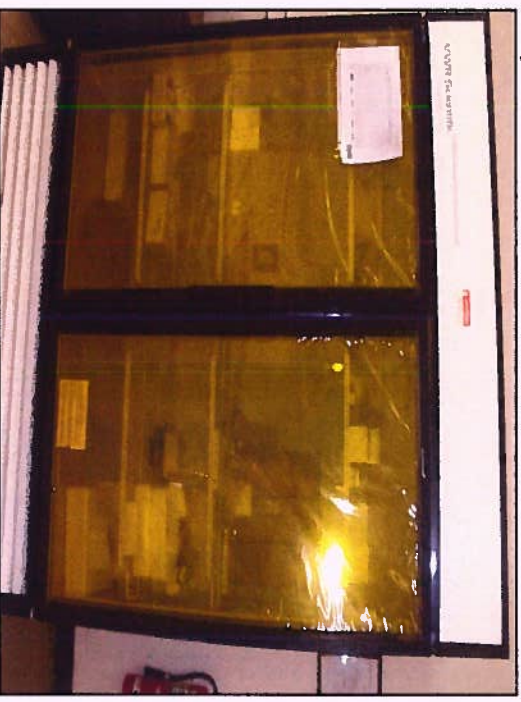


Photograph 7: Product inventory in maintenance room of Polymedco office.

Magna Metals
Cortlandt, New York



Photograph 6: Locked storage cabinet in maintenance room of Polymedco office.



Photograph 8: Refrigerator in Polymedco equipment laboratory.

APPENDIX C
SAMPLING LOGS



Indoor Air Sampling Log

ICP Properties

Cortlandt, NY

Job #: 40256

Sample by: SG/EB

Date: 01/19/2011

Sample ID #: IA-10

Summa #: 4811

Gage #: —

Flow Control # 3240

Laboratory Sample (Summa Canister)

Time Started: 0852

Vacuum: -30 in Hg

Time Stopped: 1653

Vacuum: -7 in Hg



Indoor Air Sampling Log

ICP Properties

Cortlandt, NY

Job #: 40256

Sample by: SG/EB

Date: 01/19/2011

Sample ID #: IA-11

Summa #: 3217

Gage #: —

Flow Control # 2768

Laboratory Sample (Summa Canister)

Time Started: 0827

Vacuum: -28 in Hg

Time Stopped: 1544

Vacuum: -6 in Hg



Soil Gas Sampling Log

ICP Properties

Cortlandt, NY

Job #: 40256

Sample by: SG/EB

Date: 01/19/2011

Sample ID #: SS-11

Summa #: 3636

Gage #: 5149

Flow Control # 5149

Purging

Time Started: 0817

Vol. Purged: 0.5/liters

Time Stopped: 0820

Flow Rate: L/min

Laboratory Sample (Summa Canister)

Time Started: 0820

Vacuum: -29 in Hg

Time Stopped: 1545

Vacuum: -5 in Hg

Field Sample

PID
Calibration: 96.7 ppm

PID
Reading: 0 ppm

Time Started: 0810

He
Reading: 0 ppm

Time Stopped: 0812



Indoor Air Sampling Log

ICP Properties

Cortlandt, NY

Job #: 40256

Sample by: SG/EB

Date: 01/19/2011

Sample ID #: IA-12

Summa #: 4458

Gage #: —

Flow Control # 5168

Laboratory Sample (Summa Canister)

Time Started: 0840

Vacuum: -28 in Hg

Time Stopped: 1640

Vacuum: -4 in Hg



Soil Gas Sampling Log

ICP Properties

Cortlandt, NY

Job #: 40256

Sample by: SG/EB

Date: 01/19/2011

Sample ID #: SS-12

Summa #: 503A

Gage #: —

Flow Control # 5195

Purging

Time Started: 0836

Vol. Purged: 0.5 liters

Time Stopped: 0836

Flow Rate: L/min

Laboratory Sample (Summa Canister)

Time Started: 0847

Vacuum: -30 in Hg

Time Stopped: 11041

Vacuum: -15 in Hg

Field Sample

PID
Calibration: 91.7 ppm

PID
Reading: 0 ppm

Time Started: 0810

He
Reading: 0 ppm

Time Stopped: 0812



Indoor Air Sampling Log

ICP Properties

Cortlandt, NY

Job #: 40256

Sample by: SG/EB

Date: 01/19/2011

IA-13

Sample ID #: (Blind Duplicate for Laboratory QA/QC)

Summa #: 3257

Gage #: —

Flow Control # 5177

Laboratory Sample (Summa Canister)

Time Started: 0840

Vacuum: -27 in Hg

Time Stopped: 1640

Vacuum: -16 in Hg



Outdoor Air Sampling Log

ICP Properties

Cortlandt, NY

Job #: 40256

Sample by: EB/SG

Date: 01/19/2011

Sample ID #: AA-1

Summa #: 4472

Gage #: —

Flow Control # 2804

Laboratory Sample (Summa Canister)

Time Started: 0857

Vacuum: -29 in Hg

Time Stopped: 1632

Vacuum: -3 in Hg

APPENDIX D
ANALYTICAL DATA REPORT

ANALYTICAL REPORT

Job Number: 200-3486-1

SDG Number: 200-3486

Job Description: Magna Metals

For:

AKRF Inc

34 South Broadway, Suite 314

White Plains, NY 10601

Attention: Mr. Bryan Zieroff



Approved for release
Don C Dawicki
Project Manager II
2/7/2011 3:16 PM

Don C Dawicki
Project Manager II
don.dawicki@testamericainc.com
02/07/2011

The test results in this report relate only to sample(s) as received by the laboratory. These test results were derived under a quality system that adheres to the requirements of NELAC. Pursuant to NELAC, this report may not be produced in full without written approval from the laboratory

TestAmerica Laboratories, Inc.

TestAmerica Burlington 30 Community Drive, Suite 11, South Burlington, VT 05403

Tel (802) 660-1990 Fax (802) 660-1919 www.testamericainc.com

